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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/513,873	02/28/2000	Min Li	HT99-024	9144

7590

09/24/2002

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EXAMINER

CASTRO, ANGEL A

ART UNIT

PAPER NUMBER

2651

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/513,873

Applicant(s)

LI ET AL.

Examiner

Angel A. Castro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-101 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-50 is/are allowed.
- 6) ☒ Claim(s) 51 is/are rejected.
- 7) ☐ Claim(s) 52-101 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 51 is rejected under 35 U.S.C. 102(b) as being anticipated by Ravipati (U.S. Pat. 5,838,521).

Regarding claim 51, Ravipati discloses a magnetoresistive read head (figure 4) with laminated magnetic shields comprising a first laminated magnetic shield 34, a magnetoresistive sensor element formed on the first laminated magnetic shield and a second laminated magnetic shield 32 formed on the magnetoresistive sensor element.

Allowable Subject Matter

4. Claims 1-50 are allowed.

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5. Claims 52-101 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not teach nor suggest a method for fabricating a laminated magnetic shield for an MR read head comprising forming a first layer of ferromagnetic material, forming on the first layer of ferromagnetic material a layer of ruthenium and forming on the layer of ruthenium a second layer of ferromagnetic material as set forth in claims 1 and 13. The prior art of record does not teach nor suggest a laminated magnetic shield for an MR read head comprising a first layer of ferromagnetic material, a layer of ruthenium and a second layer of ferromagnetic material as set forth in claims 26 and 38.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Macken et al (U.S. Pat. 6,437,949) discloses a single domain state laminated thin film structure; Koike et al (U.S. Pat. 6,292,334) discloses a thin film magnetic head comprising shield layer having stabilized magnetic domain structure; Nakamoto et al (U.S. Pat. 6,275,360) discloses a read-write head; Fontana, Jr. et al (U.S. Pat. 6,259,583) discloses a laminated yoke head with a domain control element; Chen et al (U.S. Pat. 6,233,116) discloses a thin film write head with improved laminated flux carrying structure; Mallary (U.S. Pat. 5,108,837) discloses a laminated poles for recording heads; Mallary (U.S. Pat. 5,103,553) discloses a method of making a magnetic recording head.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel A. Castro whose telephone number is 703-308-8435.

The examiner can normally be reached on Monday through Thursday, 8 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 703-308-4825. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-308-8435 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Angel Castro, Ph.D.
September 13, 2002



DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600